Appendix E-7: Hood Canal

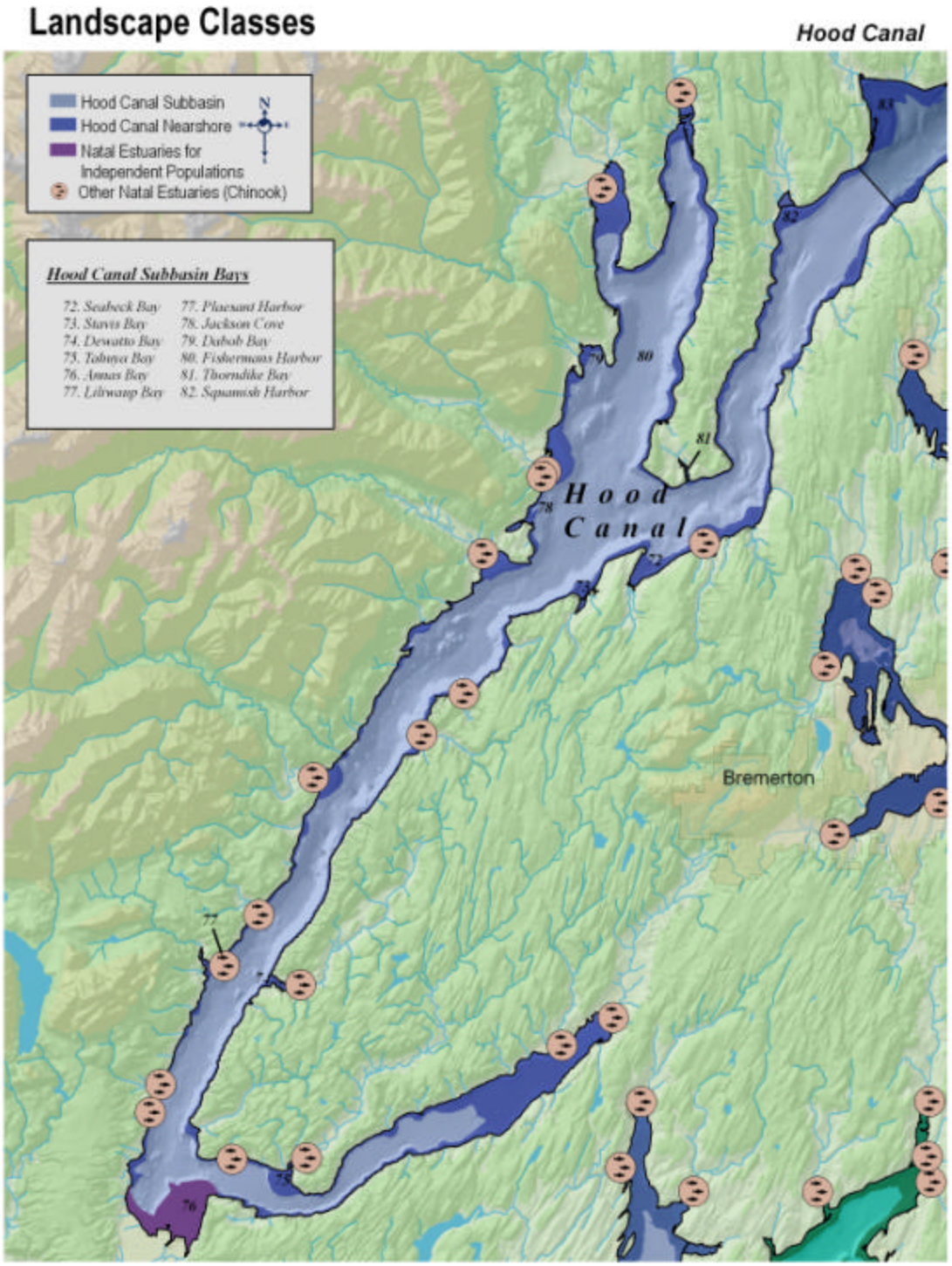


Figure E-7.1 Hood Canal Sub-basin landscape Classes.

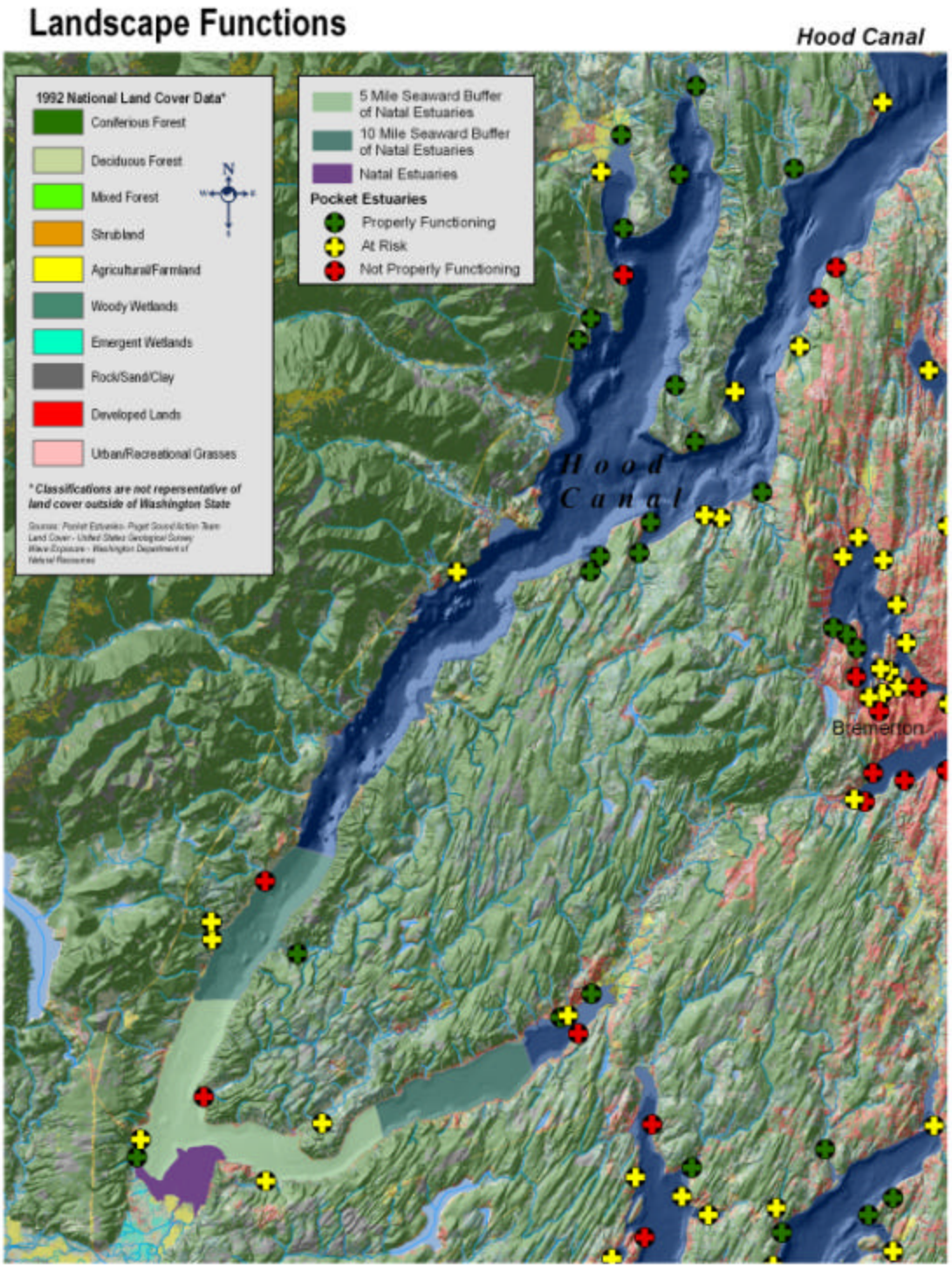
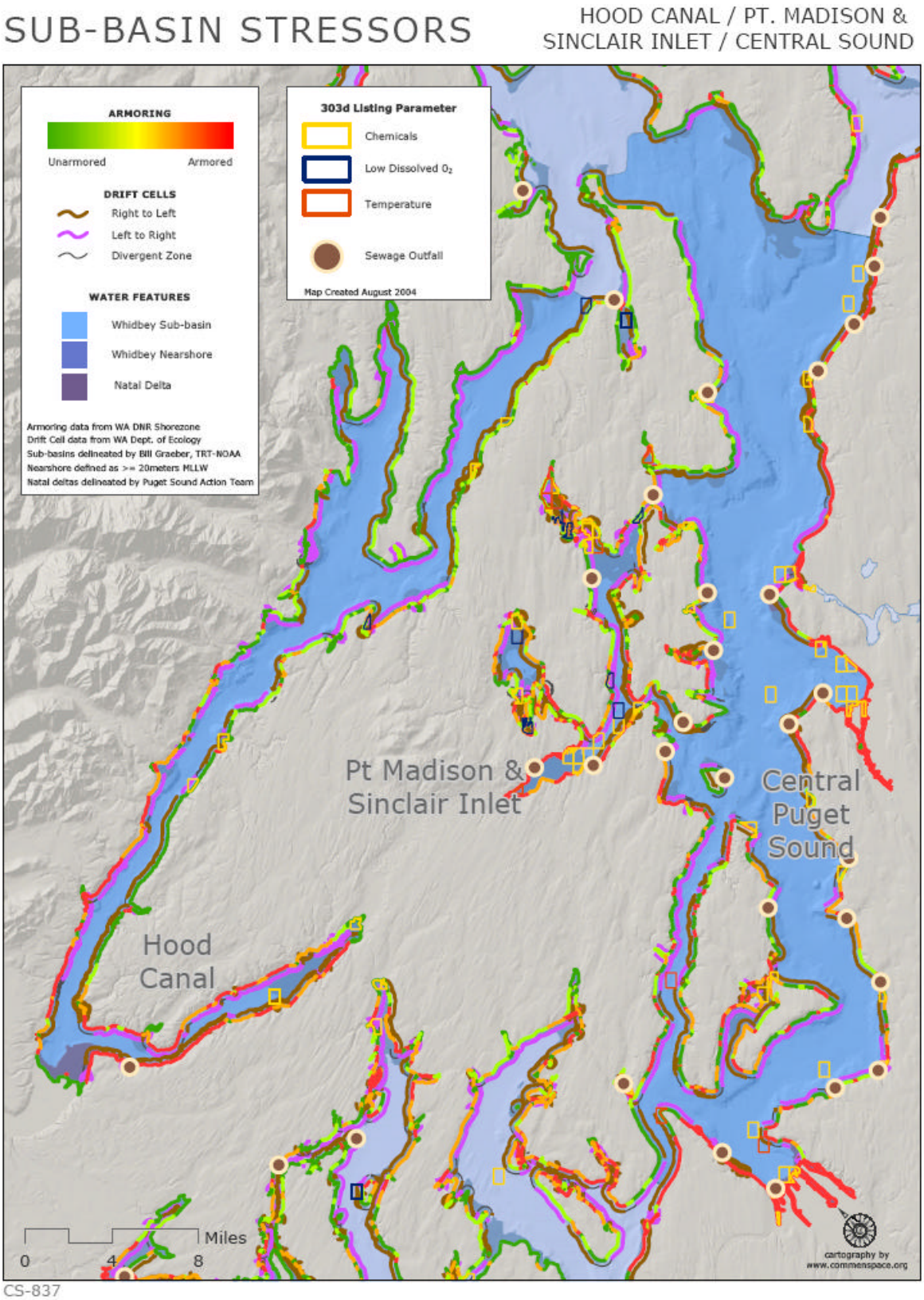


Figure E-7.2 Hood Canal Sub-basin Landscape Functions.



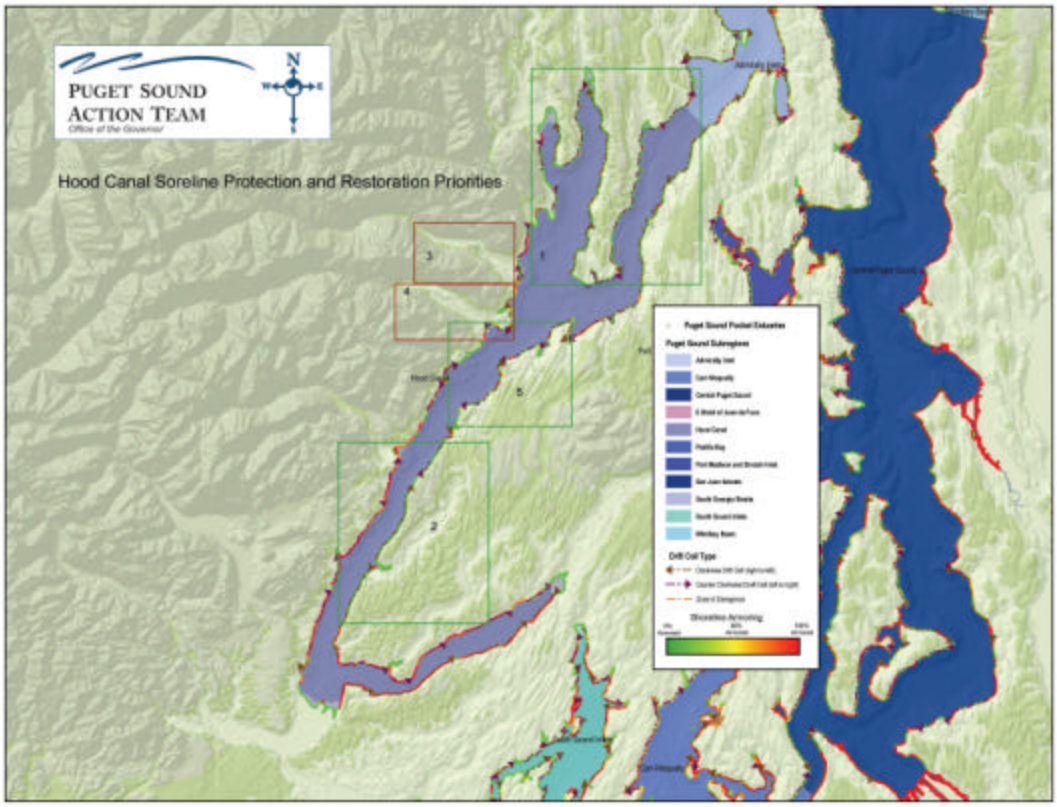
CS-837

Figure E-7.3 Hood Canal, Port Madison/Sinclair and Main Basin Stressors.

Figure E-7.4 Hood Canal Sub-basin pocket estuary locations, likely Chinook functions, and observed stressors.

Pocket Estuary Identifier	Latitude	Longitude	Photo ID #	Freshwater (Y/N)	Likely Chinook Functions			Shoreline Development	Urbanization	Diking and Filling	Susceptibility to spills and discharges	Aquaculture related substrate alterations	Vulnerability to Sea Level Rise	Final Chinook Function Score			
					Feeding	Osmoreg.	Refuge										
HC1 - Vinland	47.768	122.709	010426-144648	Y	x	x				x	x		x	NPF	PF = Property Functioning		
HC2-Hood Canal 1	47.754	122.72	010426-144744	Y				x		x	x			NPF	NPF=Not Properly Functioning		
HC3-Bangor	47.732	122.732	010426-122.732	N	x		x			x				AR	AR=At Risk		
HC4-Anderson	47.666	122.754	010426-145152	Y	x	x	x	x						PF			
HC5-Big Beef Harbor	47.654	122.781	010426-145346	Y	x	x	x	x		x	x			AR			
HC6-Little Beef	47.655	122.792	010426-145514	Y	x	x	x	x		x				AR			
HC7-Seabeck	47.637	122.835	010426-150048	Y	x	x	x	x						PF			
HC8-Misery Pt.	47.651	122.828	010426-150154	N			x							PF			
HC9-Maple Beach	47.635	122.861	010426-150342	N	x		x							PF			
HC10-Stavis Bay	47.628	122.867	010426-150500	Y	x	x	x							PF			
HC11-Dewatto	47.452	123.054	010626-144608	Y	x	x	x							PF			
HC12-Rendsland	47.386	123.113	010626-145110	Y	x	x		x	x	x	x	x		NPF			
HC13-Tahuya	47.376	123.034	010626-145508	Y	x	x	x	x						AR			
HC14-Belfair	47.427	122.878	010626-150356	N	x		x							PF			
HC15-Belfair2	47.428	122.873	010626-150422	N	x		x	x		x				AR			
HC16-Lynch Cove	47.438	122.858	010626-150500	Y	x	x	x							PF			
HC17-Devereaux	47.42	122.866	010626-151446	N			x	x	x	x				NPF			
HC18-Union	47.349	123.07	010626-152122a	Y	x	x	x	x	x				x	AR			
HC19-Potlatch	47.358	123.156	010522-100410	Y	x	x								PF			
HC20-Minerva	47.366	123.154	010522-100432	y	x	x	x	x	x		x		x	AR			
HC21-Lilliwaup1	47.457	123.111	010522-100912	Y	x	x	x	x					x	AR			
HC22-Lilliwaup2	47.465	123.112	010522-101014	Y	x	x	x	x		x				AR			
HC23-Eagle Creek	47.484	123.077	010522-101254	Y	x	x	x	x		x		x	x	NPF			
HC24-Hamma Hamma	47.548	123.037	010522-102046	Y	x	x	x	x		x		x	x	AR			
HC25-McDonald Creek	47.626	122.956	010522-102724	Y	x	x	x	x		x				AR			
HC26-Duckabush	47.649	122.927	010522-103002	Y	x	x	x	x		x				AR			
HC27-Dosewallips	47.691	122.888	010522-104044	Y	x	x		x	x	x		x		NPF			
HC28-Cove Park	47.732	122.88	010522-104408	N	x		x							PF			
HC29-Jackson Cove	47.742	122.872	010522-104602	Y	x	x	x							PF			
HC30-Whitney Point	47.762	122.851	010522-105316	N	x		x	x	x	x	x			NPF			
HC31-Quilcene Bay1	47.808	122.868	010522-105528	N	x		x			x				AR			
HC32-Quilcene Bay2	47.825	122.855	010522-105658	Y	x	x	x			x				PF			
HC33-Fishermans Point	47.783	122.852	010522-110436	N			x							PF			
HC34-Broad Spit	47.808	122.816	010522-110726	N	x		x							PF			
HC35-Tarboo Bay	47.848	122.806	010522-111224	Y	x	x	x							PF			
HC36-Zelatched Point	47.713	122.814	010522-112104a	Y	x	x	x							PF			
HC37-Fisherman Harbor	47.688	122.8	010522-112340	Y	x	x	x				x			PF			
HC38-Go-onna Dr.	47.711	122.774	010522-112740	N			x	x						AR			
HC39-Thorndike Bay	47.812	122.739	010522-113400	Y	x	x	x					x		PF			

Figure E-7.5 Hood Canal Sub-basin analysis of drift cells and shoreline armoring.



Hood Canal

Box 1 – Toandos and Bolton Peninsulas – This large area contains many shorelines that are currently experiencing very low levels of upland and shoreline development. There are several publicly owned beaches managed by DNR along these peninsulas. The generally south to north drift cells deliver sediments necessary to support a wide, sandy intertidal shelf along most of the transport sections of the cell. This shelf becomes even more extensive where interactions with deltaic sediments in Quilcene, Tarboo and Thorndike Bays produce extensive mudflats and marsh structures. Large sections of the west Kitsap peninsula within box 1 are protected from further development by the Navy Bangor sub base. Quilcene and Dabob Bays are heavily used for shellfish aquaculture so maintaining water quality by limiting shoreline development would also benefit that industry. Quilcene and Dabob Bays also experience long water residence times and are therefore susceptible to eutrophication.

Box 2 – Eastern Hood Canal shoreline from Dewatto to Holly – This section of Hood Canal shoreline has experienced little shoreline residential development because of its relative remoteness. Unlike shorelines in box 1, the littoral drift process do not appear to interact substantially with deltaic sediments. Rather many of the stream channels are deeply incised into

the uplands. Marsh and mudflat structure seem to occur well inland of the immediate shoreline in Dewatto Bay.

Boxes 3 and 4 – The intertidal structure along this section of the Hood Canal shoreline is dominated by the deltaic influences of the Duckabush and the Dosewallips Rivers as they interact with the otherwise steep, rocky shoreline of this area. Protecting the delivery of upland sediment sources from these two large rivers will be important to maintaining the functions of the nearshore in this area.

Box 5 – Anderson Cove to Seabeck – The level of development, direction of net shore drift and the influence of deltaic sediments is highly variable along this stretch of shoreline. The existing habitat structure in the nearshore reflects this complexity. At the largest scales (drift cell), protection of existing functions could be achieved by protecting the area from further development. Where bulkheads have been built along the shoreline within this box, common practice has been to place the bulkhead quite a bit seaward of Mean High Water. Education programs for residents and bulkhead contractors working in this area may be needed to prevent further degradation and to reverse this trend over time as bulkheads are replaced.

Other Hood Canal Shorelines - The Southern and Western shorelines of Hood Canal are heavily developed with structures in the intertidal zone, little remaining riparian vegetation and documented problems with septic and other pollution sources. It is likely that under GMA, continued development and redevelopment pressure will occur within these areas over the next decades. Considerable attention is being given to these shorelines to address water quality, especially as it relates to chronic low dissolved oxygen levels which may affect salmon VSPs. These shorelines are also heavily infested with Pacific oysters from years of shellfish aquaculture. Some of the soft sediment transport dynamics that may have been active in the past may no longer occur because of the stabilizing effect oysters and their shells have had on the shoreline. Significant restoration may need to take place to address the dissolved oxygen issue and broader ecosystem recovery goals. However, because of the complex ownership patterns of these shorelines and their current level of development, it is likely restoration within these areas will occur at the site scale.